

PubMed	Nucleotide	Protein	Genome	Structure	PMC	Taxonomy	OMIM	Books
Search PubMed	▼ for						Go	Clear
Limits		Preview/Index		History	Clipboard	Details		
Display	Abstract	▼	Show: 20	▼	Sort	▼	Send to	Text

☐ 1: Biotechniques. 1992 Sep;13(3):412-21.

[Related Articles, Links](#)

Entrez
PubMed

The use of synthetic peptide combinatorial libraries for the identification of bioactive peptides.

Houghten RA, Appel JR, Blondelle SE, Cuervo JH, Dooley CT, Pinilla C.

PubMed
Services

Torrey Pines Institute for Molecular Studies, San Diego, CA 92121.

Related
Resources

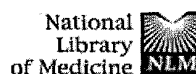
The systematic preparation of synthetic peptide combinatorial libraries (SPCLs), each composed of tens of millions of peptides that can be screened in existing diagnostically or pharmacologically relevant in vitro assay systems, is reviewed. The identification of optimal peptide sequences has been achieved through the screening in solution of SPCLs, each element of which is composed of more than 100,000 nonsupport-bound peptides in equimolar representation, along with an iterative synthesis and screening process. Examples are presented in which an SPCL, composed in total of 52,128,400 acetylated hexa-peptides, is used along with an iterative selection process to precisely identify the antigenic determinant of a peptide recognized by a monoclonal antibody using competitive enzyme-linked immunosorbent assay. This same library was also used to develop highly potent antimicrobial peptides in bacterial growth inhibition assays. A separate non-acetylated SPCL was used to screen and identify high affinity peptide ligands using an opiate radio-receptor binding assay.

PMID: 1382470 [PubMed - indexed for MEDLINE]

Display	Abstract	▼	Show: 20	▼	Sort	▼	Send to	Text	▼
---------	----------	---	----------	---	------	---	---------	------	---

[Write to the Help Desk](#)
[NCBI | NLM | NIH](#)
[Department of Health & Human Services](#)
[Freedom of Information Act | Disclaimer](#)

□



PubMed	Nucleotide	Protein	Genome	Structure	PMC	Taxonomy	OMIM	Books
Search PubMed	▼ for						Go	Clear
Limits		Preview/Index		History		Clipboard		Details
Display	Abstract	▼ Show: 20		▼ Sort		▼ Send to		Text ▼

☐ 1: Anticancer Drug Des. 1997 Apr;12(3):145-67.

[Related Articles, Links](#)

Application of combinatorial library methods in cancer research and drug discovery.

Lam KS.

Arizona Cancer Center, University of Arizona College of Medicine, Tucson 85724, USA.

Combinatorial chemistry is now considered as one of the most important recent advances in medicinal chemistry. There are five general approaches in combinatorial peptide library methods: biological libraries; spatially addressable parallel solid phase or solution phase libraries; synthetic library methods requiring deconvolution; the 'one-bead one-compound' library method; and synthetic library methods using affinity chromatography selection. Except for the biological library approach, which is limited to peptide libraries with eukaryotic amino acids, all the other four synthetic approaches are applicable to peptide, non-peptide oligomer or small molecule libraries. Although non-peptide or small molecule libraries are generally prepared by a synthetic approach, recent advances in biosynthetic methods using enzymes may enable one to prepare chemical libraries that are otherwise difficult to synthesize chemically. In the 'one-bead one-compound' library method every member of the library is screened in parallel, but the chemical structure of the positive compound-bead has to be determined either directly or via an encoding strategy. A reliable high-throughput biological assay is needed for a successful combinatorial library screen. Solid-phase binding or functional assays as well as solution phase assays have been used successfully in various library methods. There has been enormous progress in the technological advances of molecular biology and the fundamental understanding of the molecular basis of cancer in recent years. By applying combinatorial chemistry and computational chemistry to the many cancer targets that have recently been identified, it is hopeful that more potent, more specific and less toxic anti-cancer agents will be developed in the foreseeable future. In addition to being a great tool for drug discovery, combinatorial chemistry has also proven to be invaluable in basic research. A few specific examples of the applications of combinatorial chemistry in basic cancer research and drug discovery are described in this mini-review.

Publication Types:

- Review
- Review, Tutorial

PMID: 9154108 [PubMed - indexed for MEDLINE]

Display	Abstract	▼	Show: 20	▼	Sort	▼	Send to	Text	▼
---------	----------	---	----------	---	------	---	---------	------	---

[Write to the Help Desk](#)
[NCBI](#) | [NLM](#) | [NIH](#)
[Department of Health & Human Services](#)
[Freedom of Information Act](#) | [Disclaimer](#)

10/ 045/721

WEST**Freeform Search****Database:**

US Patents Full-Text Database
 US Pre-Grant Publication Full-Text Database
 JPO Abstracts Database
 EPO Abstracts Database
 Derwent World Patents Index
 IBM Technical Disclosure Bulletins

Term:

L4 and l3

Display:

10

Documents in Display Format:

CIT

Starting with Number

1

Generate:☐

Hit List

☒

Hit Count

☐

Side by Side

☐

Image

Search

Clear

Help

Logout

Interrupt

Main Menu

Show S Numbers

Edit S Numbers

Preferences

Cases

Search History**DATE:** Thursday, August 14, 2003 [Printable Copy](#) [Create Case](#)**Set Name Query**

side by side

Hit Count Set Name

result set

DB=USPT; PLUR=YES; OP=OR

<u>L5</u>	L4 and l3	85	<u>L5</u>
<u>L4</u>	differentiation near3 cell\$	12888	<u>L4</u>
<u>L3</u>	L2 and l1	1159	<u>L3</u>
<u>L2</u>	@pd<19991026	6421024	<u>L2</u>
<u>L1</u>	screening adj2 system	2197	<u>L1</u>

END OF SEARCH HISTORY

10/045,721 search

WEST

Freeform Search

Database:

US Patents Full-Text Database
US Pre-Grant Publication Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Term:

L15 and liver

Display:

10

Documents in **Display Format:**

CIT

Starting with Number

1

Generate:☐

Hit List

☒

Hit Count

☐

Side by Side

☐

Image

Search

Clear

Help

Logout

Interrupt

Main Menu

Show S Numbers

Edit S Numbers

Preferences

Cases

Search History

DATE: Thursday, August 14, 2003[Printable Copy](#)[Create Case](#)

Set Name Query
side by side

DB=USPT; PLUR=YES; OP=OR

L16 L15 and liver
L15 L14 and l13 and l12
L14 @pd<19991026
L13 screen\$
L12 "cell differentiation"
L11 "drug screening system" and "stem cell differentiation"
L10 L9 and l8
L9 differentiation.ti.
L8 L7 or screening.ti.
L7 screen.ti.
L6 method\$.ti.
L5 L4 and l3 and l1
L4 screen\$.clm.
L3 differentiation.clm.
L2 differentiation.clm
L1 stem adj cell.clm.

Hit Count Set Name
result set

739 L16
1384 L15
4292018 L14
361391 L13
4637 L12
0 L11
1 L10
311 L9
9803 L8
7819 L7
565617 L6
6 L5
62597 L4
2909 L3
0 L2
869 L1

END OF SEARCH HISTORY